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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

JONES, STEPHEN E

ART UNIT PAPER NUMBER

2817

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/826,246

Applicant(s)

SAUDER ET AL.

Examiner

Stephen E. Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) 2-5, 8, 10-12, 17-36, 38, 39, 42-44, 46 and 51-73 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 7, 9, 14-16, 37, 40, 41, 45 and 48-50 is/are rejected.
- 7) ☒ Claim(s) 13 and 47 is/are objected to.
- 8) ☒ Claim(s) 1-73 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species VI. (Fig. 6) in Paper No. 7 is acknowledged. Applicant indicated that claims 1, 6, 7, 9, 13-16, 37, 40, 41, 45, and 47-50 read on the elected species.
2. Claims 2-5, 8, 10-12, 17-36, 38-39, 42-44, 46, and 51-73 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 7.

Claim Objections

3. Claims 9, 13, 14, 45, 47, 48, and 50 are objected to because of the following informalities:

Regarding Claim 9 (lines 2 and 3), Claim 13 (lines 5, 7, and 9), Claim 14 (lines 3 and 4), Claim 45 (lines 2 and 4), Claim 47 (lines 6, 8, and 10), and Claim 48 (lines 3 and 4), it appears that the phrase "the at least one cavity" would be more clear if it read as --one of the at least one cavity-- since the phrase "at least one cavity" can include a plurality of cavities and the connector is coupled to one of the plurality of cavities (as shown in Fig. 6).

Regarding Claim 50 (line 3), it appears that the phrase "in a surface" should read as --on a surface-- since the signal trace is on a surface of the circuit board as shown in the elected Fig. 6.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 14, the phrase "the at least one circuit formed in the circuit board" lacks antecedent basis and thus is not clear as to what applicant is intending to claim. Also the expression "in the circuit board" is not clear. Should the expression "in the circuit board" read as --on the circuit board-- instead (e.g. see Fig. 6)?

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 9, and 14-16 (insofar as claims 14-16 could be understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Satoh et al.

Satoh et al. (Figs. 1-2) teaches a filter including: a plurality of cavities (101a, 101b, etc.); a dielectric board forms one wall of the cavities and has transmission lines (106a, 108a, 106b, 108b, etc.) on the board (i.e. traces on a circuit board) (see Col. 7 (lines 60-65) and Col. 10 (lines 34-36 and 45-50)) (Claims 15 and 16 insofar as could be understood); circuit reactance elements (110a, 110b, etc.) are coupled to the

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transmission lines (Claim 1); input and output connectors (103) are coupled to the two end cavities respectively and the connectors are on the circuit board (see Fig. 1) (Claim 9). Also, insofar as Claim 14 could be understood, Satoh teaches input coupling (107a) in the first cavity (101a) and output coupling (107e) in the last cavity (101e).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 6-7, 37, 40, 41, 45, and 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoh et al. in combination with Piloto et al. and Newell et al.

Satoh et al. teaches a filter as described above (including the subject matter of Claims 45 and 48-50). However, Satoh does not teach a power amplifier (i.e. and electronic component) that is coupled to the trace (Claims 6-7, 37, 40, 41).

Piloto et al. teaches a waveguide filter which includes dielectric circuit boards on the top of the filter for mounting circuit components such as power components and signal lines (see Col. 8, lines 49-52 and Figs. 4 and 8).

Newell et al. teaches using power amplifiers in combination with filters (e.g. see Figs. 1-2).

It would have been considered obvious to one of ordinary skill in the art to have included additional dielectric circuit board material on the top side of circuit board of the filter (such as taught by Piloto et al.) in the Satoh filter and to have included a power amplifier (such as taught by Newell) on the top side of the circuit board connected to the input and or output of the filter transmission line (108 of Satoh), because amplifying filter signals is well-known for providing a useful signal level to a transmitter or from a receiver, and the addition of the dielectric material would have provided the advantageous benefit of additional surface area for mounting additional circuitry including the power amplifier taught by Newell, thereby suggesting the obviousness of such modifications.

Allowable Subject Matter

11. Claims 13 and 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

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Satoh et al. does not teach an input connector coupled to a first stage in combination with an output coupling mounted in the first stage and coupled to an input of an amplifier, an input coupling mounted in a second stage and coupled to an output of the amplifier, and an output connector coupled to the second stage.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Pelkonen teaches a filter having a dielectric board and traces.

Hattori et al. teaches a dielectric filter including a dielectric board having coupling conductors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen E. Jones whose telephone number is 703-305-0390. The examiner can normally be reached on Monday through Friday from 8 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on 703-308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-6251 for regular communications and 703-308-6251 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


Stephen Jones
Patent Examiner
Art Unit 2817

SEJ
March 26, 2003